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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/433,586	11/04/1999	ROGER GUY MARKHAM	103245	2748

7590 05/09/2003

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EXAMINER
RAHIMI, IRAJ A

ART UNIT	PAPER NUMBER
2622	4

DATE MAILED: 05/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/433,586	MARKHAM, ROGER GUY	
	Examiner	Art Unit	
	(Iraj) Alan Rahimi	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 November 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11/4/99* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 11, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh (US patent 5,729,351) in view of Newman (US patent 5,287,452).

Regarding claim 1, Oh discloses an apparatus that counts pixels in regions of interest within data present on a data bus, the data on the data bus including image data having active and inactive pixels, the apparatus comprising a pixel counter, coupled to the data bus, that selectively reads the image data from the data on the data bus and that generates a pixel count based on the active pixels of the image data (column 5, lines 38-61). However, Oh does not clearly disclose reading the image data selectively. Newman teaches in column 7, lines 28-51 that image data can be selected based on the starting and ending address. He also discloses in column 2, lines 63-67 and column 3, lines 1-23 that image data is written into memory across a bus 12. Oh and Newman are analogous art because they are from the same field of endeavor that is image processing. Therefore, it would have been obvious to a person skilled in the art, at the time of invention to combine Oh with Newman to control storage of image data in memory.

Regarding claim 2, Oh discloses the apparatus according to claim 1, wherein the pixel counter includes:

a counter coupled to the pixel count controller that counts the active pixels of the image data (column 5, lines 47-48); and

a memory, coupled to the pixel counter controller and the counter, that stores the pixel count (memory 216).

However, Oh does not disclose a pixel count controller 211 coupled to the data bus that determines whether the data on the data bus is image data based on the image data identifying portion. Newman teaches in column 7, lines 28-51 that address translator 204 determines if the address on the bus corresponds to image data. Oh and Newman are analogous art because they are from the same field of endeavor that is image processing. Therefore, it would have been obvious to a person skilled in the art, at the time of invention to combine Oh with Newman to selectively utilize image data for representation.

Regarding claim 3, Newman discloses the apparatus according to claim 1, wherein the data on the data bus includes a data portion, a memory address portion, and an image data identifying portion (column 3, lines 11-23).

Regarding claim 4, Newman discloses the apparatus according to claim 3, wherein the image data identifying portion is an image data flag that indicates whether the data on the data bus is image data (column 2, lines 62-67; column 3, lines 1-10; virtual address signal is considered the flag).

Regarding claim 5, Newman discloses the apparatus according to claim 3, wherein:

the image data identifier portion includes an address; and when the image data identifier portion is the address of an image data memory connected to the bus, the pixel counter determines that the data on the data bus is image data (column 2, lines 62-67; column 3, lines 1-10).

Regarding claim 11, Oh discloses the apparatus according to claim 1, wherein the pixel counter comprises:

an adder that receives image data and counts the active pixels present in the image data;

a frame counter that measures the amount of image data being added by the adder and instructs a memory to read the active pixel count from the adder and store the read pixel count when a frame of image data has been counted (column 5, lines 43-61).

Regarding claim 18, Newman discloses the method according to claim 12, wherein selectively reading the image data comprises selectively reading the image data from the data bus based on an address in the image data identifying portion of the data on the data bus (column 3, lines 3-23).

Regarding claim 19, Newman discloses the method according to claim 18, wherein the data on the data bus is image data if the address is the address of a memory (column 3, lines 3-10).

3. Claims 6-10, 12, 13 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh (US patent 5,729,351) in view of Newman (US patent 5,287,452) and further in view of Inora et al. (US patent (6,145,947).

Regarding claim 6, Oh and Newman do not disclose the apparatus according to claim l, wherein the image data is grouped into a scan line, the scan line comprising at least one row of pixels extending across an image Inora et al. discloses in Figure 6 several scan lines of pixels of which any one could be used for counting. Oh, Newman and Inora et al. are analogous art because they are from the same field of endeavor that is image processing. Therefore, it would have been obvious to a person skilled in the art, at the time of invention to combine Oh and Newman with Inora et al. to determine ink consumption.

Regarding claim 7, Inora et al. discloses the apparatus according to claim 6, wherein each scan line is divided into a plurality of frames, each of the frames comprising a predetermined number of consecutive pixels of the scan line (Figure 6).

Regarding claim 8, Inora discloses the apparatus according to claim 7, wherein the plurality of frames are further divided into a plurality of pixel blocks, each of the pixel blocks comprising a predetermined number consecutive pixels of a frame (Fig. 6).

Regarding claim 9, Inora discloses the apparatus according to claim 7, wherein:
the pixel counter generates the pixel count based on the pixel count in each of the frame; and
a memory separately stores the active count of each frame (Column 5, lines 19-28).

Regarding claim 10, Inora et al. discloses the apparatus according to claim 6, wherein the pixel counter generates the pixel count based on the active pixels of each of the scan lines (Column 5, lines 19-28).

Regarding claims 12 and 13, arguments analogous to those presented for claim 1 and 2, are applicable.

Regarding claims 14-17, arguments analogous to those presented for claim 6-9, are applicable.

Other prior art cited

4. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

Nakamura (US patent 5,818,607) discloses encoding image signal into code signal while always confirming that the image signal of at least one line is stored.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Iraj) Alan Rahimi whose telephone number is 703-306-3473. The examiner can normally be reached on Mon.-Fri. 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L Coles can be reached on 703-305-4712. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3800.

Alan Rahimi
May 1, 2003

EDWARD COLES
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